

# SEQUENCE LISTING

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<120> METHODS AND COMPOUNDS FOR MODULATING NUCLEAR RECEPTOR  
COACTIVATOR BINDING

<130> UCAL-253/02US

<140> 09/281,717

<141> 1999-03-30

<150> US 60/079,956

<151> 1998-03-30

<160> 51

<170> PatentIn Ver. 2.1

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<212> PRT

<213> Homo sapiens

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<222> (2)..(3)

<223> Xaa = Any Amino Acid

<400> 1

Leu Xaa Xaa Leu Leu

1

5

<210> 2

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<213> Homo sapiens

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Ile Leu Xaa Xaa Leu Leu  
1 5

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<400> 3  
Phe Xaa Xaa Leu Trp  
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<400> 4  
Phe Xaa Xaa Ala Leu  
1 5

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<400> 5  
Ala Glu Gly His Ser Arg Leu His Asp Ser Lys Gly Gln Thr Lys Leu  
1 5 10 15

Leu Gln Leu Leu Thr Thr Lys Ser Glu Gln Met Glu Pro Ser Pro Leu

Ala Ser

<210> 6  
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<222> (16)  
<223> Leu --> Ala

<220>  
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<220>  
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<223> Leu --> Ala

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<220>  
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<222> (15)..(16)  
<223> LeuLeu --> AlaAla

<220>  
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<222> (17)..(18)  
<223> HisArg --> AlaAla

<220>  
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<222> (19)..(20)  
<223> LeuLeu --> AlaAla

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<222> (15)  
<223> Ile --> Phe

<220>  
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<223> Leu --> Phe

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<223> Leu --> Phe

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<223> Leu --> Phe

<400> 6  
Pro Gly Ser Thr His Gly Thr Ser Leu Lys Glu Lys His Lys Ile Leu  
1 5 10 15

His Arg Leu Leu Gln Asp Ser Ser Ser Pro Val Asp Leu Ala Lys Leu  
20 25 30

Thr Ala

<210> 7  
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<400> 7  
Glu Pro Ala Ser Pro Lys Lys Lys Glu Asn Ala Leu Leu Arg Tyr Leu  
1 5 10 15

Leu Asp Lys Asp Asp Thr Lys Asp Ile Gly Leu Pro Glu Ile Thr  
20 25 30

<210> 8

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<400> 8  
Ala Asp Gly Gln Ser Arg Leu His Asp Ser Lys Gly Gln Thr Lys Leu  
1 5 10 15  
Leu Gln Leu Leu Thr Thr Lys Ser Glu Gln Met Glu Pro Ser Pro Leu  
20 25 30  
Ala Ser

<210> 9  
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<400> 9  
Ser Gly Ser Thr His Gly Thr Ser Leu Lys Glu Lys His Lys Ile Leu  
1 5 10 15  
His Arg Leu Leu Gln Asp Ser Ser Ser Pro Val Asp Leu Ala Lys Leu  
20 25 30  
Thr Ala

<210> 10  
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<400> 10  
Glu Pro Val Ser Pro Lys Lys Lys Glu Asn Ala Leu Leu Arg Tyr Leu  
1 5 10 15  
Leu Asp Lys Asp Asp Thr Lys Asp Ile Gly Leu Pro Glu Ile Thr  
20 25 30

<210> 11  
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<213> Homo sapiens

<400> 11

Ala Glu Gly His Ser Arg Leu His Asp Ser Lys Gly Gln Thr Lys Leu  
1 5 10 15

Leu Gln Leu Leu Thr Thr Lys Ser Glu Gln Met Glu Pro Ser Pro Leu  
20 25 30

Pro Ser

<210> 12

<211> 34

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<213> Homo sapiens

<400> 12

Pro Gly Ser Thr His Gly Thr Ser Leu Lys Glu Lys His Lys Ile Leu  
1 5 10 15

His Arg Leu Leu Gln Asp Ser Ser Ser Pro Val Asp Leu Ala Lys Leu  
20 25 30

Thr Ala

<210> 13

<211> 31

<212> PRT

<213> Homo sapiens

<400> 13

Glu Pro Ala Ser Pro Lys Lys Lys Glu Asn Ala Leu Leu Arg Tyr Leu  
1 5 10 15

Leu Asp Lys Asp Asp Thr Lys Asp Ile Gly Leu Pro Ser Ile Thr  
20 25 30

<210> 14

<211> 34

<212> PRT

<213> Homo sapiens

<400> 14

Ala Glu Asn Gln Arg Gly Pro Leu Glu Ser Lys Gly His Lys Lys Leu

1	5	10	15
Leu Gln Leu Leu Thr Cys Ser Ser Glu Asp Arg Gly His Ser Ser Leu			
20	25	30	

Thr Asn

<210> 15  
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<400> 15
Thr Ser Asn Met His Gly Ser Leu Leu Gln Glu Lys His Arg Ile Leu
1 5 10 15

His Lys Leu Leu Gln Asn Gly Asn Ser Pro Ala Glu Val Ala Lys Ile
20 25 30

Thr Ala

<210> 16  
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<400> 16
Glu Gln Leu Ser Pro Lys Lys Lys Glu Asn Asn Ala Leu Leu Arg Tyr
1 5 10 15

Leu Leu Asp Arg Asp Asp Pro Ser Asp Val Leu Ala Lys Lys Leu Gln
20 25 30

<210> 17  
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<400> 17
Ala Glu Asn Gln Arg Gly Pro Leu Glu Ser Lys Gly His Lys Lys Leu

1	5	10	15
Leu Gln Leu Leu Thr Cys Ser Ser Asp Asp Arg Gly His Ser Ser Leu			
20	25	30	

Thr Asn

<210> 18  
 <211> 34  
 <212> PRT  
 <213> Homo sapiens

<400> 18
Thr Ser Asn Met His Gly Ser Leu Leu Gln Glu Lys His Arg Ile Leu
1 5 10 15

His Lys Leu Leu Gln Asn Gly Asn Ser Pro Ala Glu Val Ala Lys Ile
20 25 30

Thr Ala

<210> 19  
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 <212> PRT  
 <213> Homo sapiens

<400> 19
Glu Gln Leu Ser Pro Lys Lys Lys Glu Asn Asn Ala Leu Leu Arg Tyr
1 5 10 15

Leu Leu Asp Arg Asp Asp Pro Ser Asp Ala Leu Ser Lys Glu Leu Gln
20 25 30

<210> 20  
 <211> 34  
 <212> PRT  
 <213> Homo sapiens

<400> 20
Ser Glu Thr Pro Arg Gly Pro Leu Glu Ser Lys Gly His Lys Lys Leu



1	5	10	15
Leu Gln Leu Leu Thr Cys Ser Ser Glu Asp Arg Gly His Ser Ser Leu			
20	25	30	

Thr Asn

<210> 21  
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 <213> Homo sapiens

<400> 21			
Thr Ser Asn Val His Gly Ser Leu Leu Gln Glu Lys His Arg Ile Leu			
1	5	10	15

His Lys Leu Leu Gln Asn Gly Asn Ser Pro Ala Glu Val Ala Lys Ile		
20	25	30

Thr Ala

<210> 22  
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<400> 22		
Glu Gln Leu Ser Pro Lys Lys Lys Glu Asn Asn Ala Leu Leu Arg Tyr		
1	5	10

Leu Leu Asp Arg Asp Asp Pro Ser Asp Ala Leu Ser Lys Glu Leu Gln		
20	25	30

<210> 23  
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 <213> Homo sapiens

<400> 23		
Ser Glu Gly Asp Ser Lys Tyr Ser Gln Thr Ser His Lys Leu Val Gln		

1	5	10	15												
Leu	Leu	Thr	Thr	Thr	Ala	Glu	Gln	Gln	Leu	Arg	His	Ala	Asp	Ile	Asp
			20					25					30		

<210> 24  
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 <213> Homo sapiens

<400> 24															
Thr	Cys	Pro	Ser	Ser	His	Ser	Ser	Leu	Thr	Glu	Arg	His	Lys	Ile	Leu
1				5					10					15	
His	Arg	Leu	Leu	Gln	Glu	Gly	Ser	Pro	Ser	Asp	Ile	Thr	Thr	Leu	Ser
			20					25						30	

Val

<210> 25  
 <211> 34  
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<400> 25															
Glu	Leu	Asp	Ala	Ala	Lys	Lys	Lys	Glu	Ser	Lys	Asp	His	Gln	Leu	Leu
1				5					10					15	
Arg	Tyr	Leu	Leu	Asp	Lys	Asp	Glu	Lys	Asp	Leu	Arg	Ser	Thr	Pro	Asn
			20					25						30	

Leu Cys

<210> 26  
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<222> (1)
<223> Xaa = Any Amino Acid

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<222> (2)
<223> Xaa = Any Negatively Charged Amino Acid

<220>
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<223> Xaa = Any Amino Acid

<220>
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<222> (11)..(14)
<223> Xaa = Any Amino Acid

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<222> (17)
<223> Xaa = Any Hydrophobic Amino Acid

<220>
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<222> (22)..(24)
<223> Xaa = Any Amino Acid

<220>
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<222> (25)
<223> Xaa = Any Negatively Charged Amino Acid

<220>
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<222> (26)..(34)
<223> Xaa = Any Amino Acid

<400> 26
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ser Xaa Xaa Xaa Xaa Lys Leu
  1               5               10               15

Xaa Gln Leu Leu Thr Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
  20               25               30

Xaa Xaa

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<210> 27  
<211> 34  
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<220>  
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<223> Xaa = Any Amino Acid

<220>  
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<222> (10)  
<223> Xaa = Any Amino Acid

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<222> (12)  
<223> Xaa = Any Positively Charged Amino Acid

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<223> Xaa = Any Positively Charged Amino Acid

<220>  
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<223> Xaa = Any Positively Charged Amino Acid

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<222> (22)..(24)  
<223> Xaa = Any Amino Acid

<220>  
<221> SITE  
<222> (27)  
<223> Xaa = Any Amino Acid

<220>  
<221> SITE  
<222> (28)  
<223> Xaa = Any Negatively Charged Amino Acid

<220>  
<221> SITE

<223> Xaa = Any Hydrophobic Amino Acid

<223> Xaa = Any Amino Acid

<223> Xaa = Any Hydrophobic Amino Acid

<223> Xaa = Any Amino Acid

His Xaa Leu Leu Gln Xaa Xaa Xaa Ser Pro Xaa Xaa Xaa Xaa Xaa Xaa  
20 25 30

**Xaa Xaa**

<213> Homo sapiens

<223> Xaa = Any Amino Acid

<223> Xaa = Any Amino Acid

<223> Xaa = Any Positively Charged Amino Acid

<220>  
 <221> SITE  
 <222> (24)  
 <223> Xaa = Any Negatively Charged Amino Acid

<220>  
 <221> SITE  
 <222> (25)..(32)  
 <223> Xaa = Any Amino Acid

<220>  
 <221> SITE  
 <222> (33)  
 <223> Xaa = Any Hydrophobic Amino Acid

<220>  
 <221> SITE  
 <222> (34)  
 <223> Xaa = Any Amino Acid

<400> 28  
 Glu Xaa Xaa Xaa Xaa Lys Lys Lys Glu Xaa Xaa Xaa Xaa Xaa Leu Leu  
           1                  5                  10                  15  
 Arg Tyr Leu Leu Asp Xaa Asp Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
                   20                  25                  30  
 Xaa Xaa

<210> 29  
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 <212> PRT  
 <213> Homo sapiens

<400> 29  
 Thr Ser Leu Lys Glu Lys His Lys Leu Leu Arg Tyr Leu Leu Gln Asp  
           1                  5                  10                  15  
 Ser Ser

<210> 30  
 <211> 33  
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<213> Homo sapiens

<220>

<221> MUTAGEN

<222> (5)

<223> Thr --> Arg (T281R)

<220>

<221> MUTAGEN

<222> (8)

<223> Val --> Arg (V284R)

<220>

<221> MUTAGEN

<222> (9)

<223> Asp --> Ala (D285A)

<220>

<221> MUTAGEN

<222> (12)

<223> Lys --> Ala (K288A)

<220>

<221> MUTAGEN

<222> (22)

<223> Cys --> Arg (C298R)

<220>

<221> MUTAGEN

<222> (26)

<223> Ile --> Arg (I302R)

<220>

<221> MUTAGEN

<222> (30)

<223> Lys --> Ala (K306A)

<400> 30

Thr Pro Ala Ile Thr Arg Val Val Asp Phe Ala Lys Lys Leu Pro Met  
1 5 10 15

Phe Cys Glu Leu Pro Cys Glu Asp Gln Ile Ile Leu Leu Lys Gly Cys  
20 25 30

Cys

<210> 31  
<211> 12  
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<223> Leu --> Arg (L454R)

<220>  
<221> MUTAGEN  
<222> (7)  
<223> Leu --> Arg (L456R)

<220>  
<221> MUTAGEN  
<222> (8)  
<223> Glu --> Lys (E457K)

<400> 31  
Leu Phe Pro Pro Leu Phe Leu Glu Val Phe Glu Asp  
1 5 10

<210> 32  
<211> 33  
<212> PRT  
<213> Homo sapiens

<400> 32  
Thr Pro Ala Ile Thr Arg Val Val Asp Phe Ala Lys Lys Leu Pro Met  
1 5 10 15

Phe Ser Glu Leu Pro Cys Glu Asp Gln Ile Ile Leu Leu Lys Gly Cys  
20 25 30

Cys

<210> 33  
<211> 12  
<212> PRT  
<213> Homo sapiens

<400> 33  
Leu Phe Pro Pro Leu Phe Leu Glu Val Phe Glu Asp



1 5 10

<210> 34  
<211> 33  
<212> PRT  
<213> Homo sapiens

<400> 34  
Thr Lys Cys Ile Ile Lys Ile Val Glu Phe Ala Lys Arg Leu Pro Gly  
1 5 10 15  
Phe Thr Gly Leu Ser Ile Ala Asp Gln Ile Thr Leu Leu Lys Ala Ala  
20 25 30

Cys

<210> 35  
<211> 12  
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<400> 35  
Leu Phe Pro Pro Leu Phe Leu Glu Val Phe Glu Asp  
1 5 10

<210> 36  
<211> 33  
<212> PRT  
<213> Homo sapiens

<400> 36  
Asp Lys Gln Leu Phe Thr Leu Val Glu Trp Ala Lys Arg Ile Pro His  
1 5 10 15  
Phe Ser Glu Leu Pro Leu Asp Asp Gln Val Ile Leu Leu Lys Ala Gly  
20 25 30

Trp

<210> 37  
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<213> Homo sapiens

<400> 37

Pro Ile Asp Thr Phe Leu Met Glu Met Leu Glu Ala  
1 5 10

<210> 38

<211> 33

<212> PRT

<213> Homo sapiens

<400> 38

Val Glu Ala Val Gln Glu Ile Thr Glu Tyr Ala Lys Asn Ile Pro Gly  
1 5 10 15

Phe Ile Asn Leu Asp Leu Asn Asp Gln Val Thr Leu Leu Lys Tyr Gly  
20 25 30

Val

<210> 39

<211> 12

<212> PRT

<213> Homo sapiens

<400> 39

Ser Leu His Pro Leu Leu Gln Glu Ile Tyr Lys Asp  
1 5 10

<210> 40

<211> 33

<212> PRT

<213> Homo sapiens

<400> 40

Ser Tyr Ser Ile Gln Lys Val Ile Gly Phe Ala Lys Met Ile Pro Gly  
1 5 10 15

Phe Arg Asp Leu Thr Ser Glu Asp Gln Ile Val Leu Leu Lys Ser Ser  
20 25 30

Ala

<210> 41  
<211> 12  
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<400> 41  
Lys Leu Thr Pro Leu Val Leu Glu Val Phe Gly Asn  
1 5 10

<210> 42  
<211> 33  
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<220>  
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<222> (12)  
<223> Lys --> Ala (K362A)

<220>  
<221> MUTAGEN  
<222> (26)  
<223> Val --> Arg (V376R)

<400> 42  
Asp Arg Glu Leu Val His Met Ile Asn Trp Ala Lys Arg Val Pro Gly  
1 5 10 15

Phe Val Asp Leu Thr Leu His Asp Gln Val His Leu Leu Glu Cys Ala  
20 25 30

Trp

<210> 43  
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<212> PRT  
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<220>  
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<222> (8)  
<223> Glu --> Lys (E542K)

<400> 43

Pro Leu Tyr Asp Leu Leu Leu Glu Met Leu Asp Ala  
1 5 10

<210> 44  
<211> 33  
<212> PRT  
<213> Homo sapiens

<400> 44  
Gly Arg Gln Val Ile Ala Ala Val Lys Trp Ala Lys Ala Ile Pro Gly  
1 5 10 15

Phe Arg Asn Leu His Leu Asp Asp Gln Met Thr Leu Leu Gln Tyr Ser  
20 25 30

Trp

<210> 45  
<211> 12  
<212> PRT  
<213> Homo sapiens

<400> 45  
Glu Phe Pro Glu Met Leu Ala Glu Ile Ile Thr Asn  
1 5 10

<210> 46  
<211> 33  
<212> PRT  
<213> Homo sapiens

<400> 46  
Glu Arg Gln Leu Leu Ser Val Val Lys Trp Ser Lys Ser Leu Pro Gly  
1 5 10 15

Phe Arg Asn Leu His Ile Asp Asp Gln Ile Thr Leu Ile Gln Tyr Ser  
20 25 30

Trp

<210> 47  
<211> 12

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<213> Homo sapiens

<400> 47  
Glu Phe Pro Glu Met Met Ser Glu Val Ile Ala Ala  
1 5 10

<210> 48  
<211> 33  
<212> PRT  
<213> Homo sapiens

<400> 48  
Gly Lys Gln Met Ile Gln Val Val Lys Trp Ala Lys Val Leu Pro Gly  
1 5 10 15

Phe Lys Asn Leu Pro Leu Glu Asp Gln Ile Thr Leu Ile Gln Tyr Ser  
20 25 30

Trp

<210> 49  
<211> 12  
<212> PRT  
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<400> 49  
Glu Phe Pro Ala Met Leu Val Glu Ile Ile Ser Asp  
1 5 10

<210> 50  
<211> 33  
<212> PRT  
<213> Homo sapiens

<400> 50  
Glu Arg Gln Leu Val His Val Val Lys Trp Ala Lys Ala Leu Pro Gly  
1 5 10 15

Phe Arg Asn Leu His Val Asp Asp Gln Met Ala Val Ile Gln Tyr Ser  
20 25 30

Trp

<210> 51

<211> 12

<212> PRT

<213> Homo sapiens

<400> 51

Asp Phe Pro Glu Met Met Ala Glu Ile Ile Ser Val

1

5

10